

SERVICE MANUAL
Level 1&2**RM-509/RM-510****Transceiver characteristics****Band:**

- EGSM 850/900/1800/1900
- WCDMA 900/1700-2100/2100 (RM-509)
- WCDMA 850/1900/2100 (RM-510)

Display:

- Main display 240x320 TFT 2,2" 16 million colors
- Secondary display 128x160 TFT 1.36", black and white

Camera:

3.2 megapixel camera with 4x zoom

Operating System:

Series 40 version 9.1

Connections:

- Bluetooth 2.1 +EDR
- 2.5 mm AV connector
- Micro USB, USB 2.0
- A-GPS, Maps 2.0

Transceiver with BL-4S (860 mAh) battery pack

Talk time	Standby
GSM: Up to 4 hours	GSM: Up to 288 hours
WCDMA: Up to 3 hours	

NOTE: Talk times are dependant on network parameters and phone settings

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1. CHANGE HISTORY

Status	Version No.	Date	Comments
Approved	1.0	16.10.2009	First approved version
Approved	2.0	03.12.2009	Exploded view updated

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

Nokia Care Academy
<mailto:Service.Manuals@nokia.com>

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

2. COPYRIGHT

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The availability of particular products may vary by region.

IMPORTANT

This document is intended for use by qualified service personnel only.

3. WARNINGS AND CAUTIONS

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

3.1 Warnings

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

3.2 Cautions

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly

4. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.



Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.

To replace the covers ESD protection must be applied.

All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the product or handling the product components must be done under ESD protection.

ESD protected spare part packages MUST NOT be opened/closed out of an ESD Protected Area.

For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.

5. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to the product, battery, charger or any accessory.

6. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out.

When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time. Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMh batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means. Use the battery only for its intended purpose.

Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Shortcircuiting the terminals may damage the battery or the connecting object.

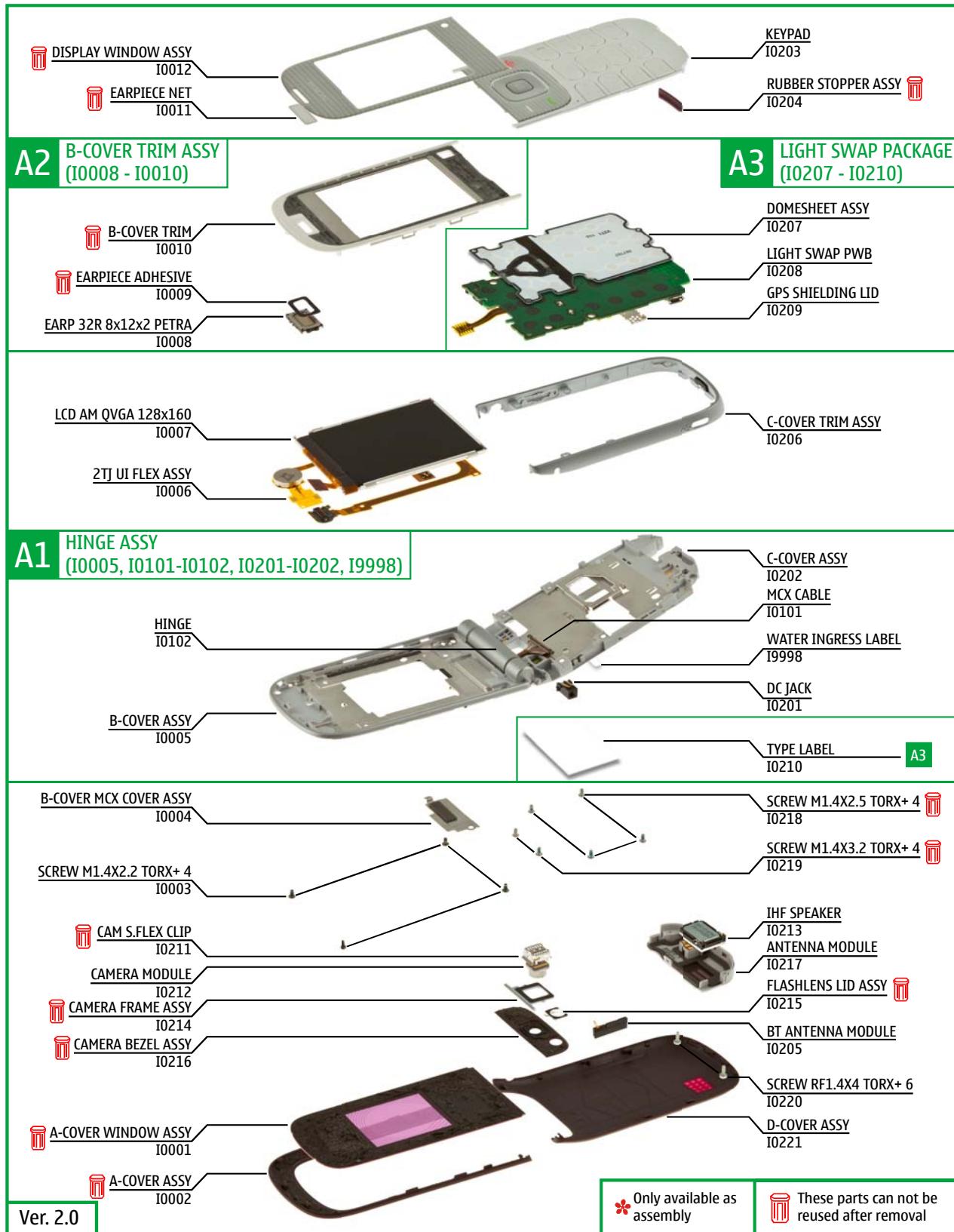
Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling).

Do not dispose as household waste.

7. EXPLODED VIEW



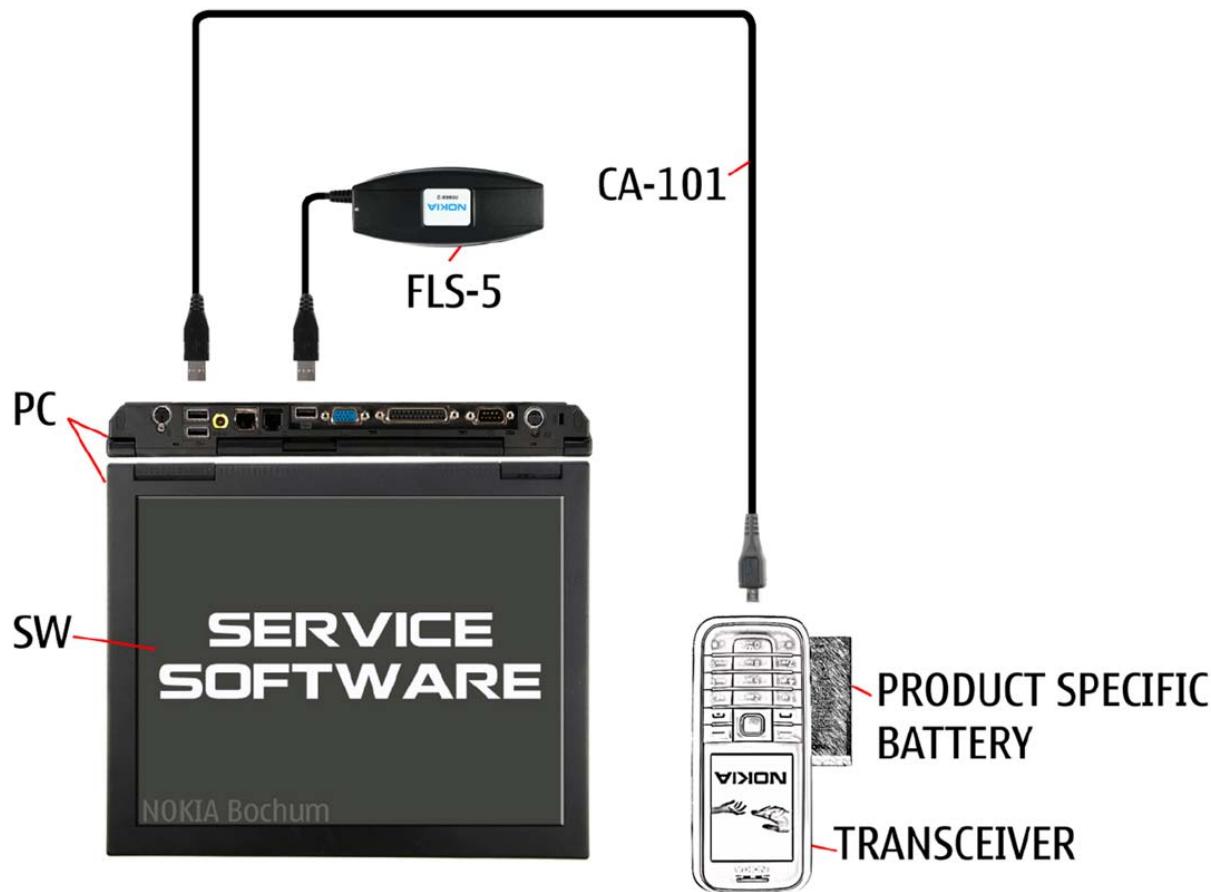
8. SERVICE DEVICES

 FLS-5	 CA-101 100cm	
FLS-5 Flash Device	CA-101 Service Cable	AC-8 Travel Charger

		 NMP standard toolkit (v2) For more information, refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in "Recommended service equipment" document on NOKIA Online.
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9. SW-UPDATE**Flash concept- (Point of Sales)**

To use the FLS-5 Flash Dongle, follow the user guide inside the sales package.
Please check always for the latest version of flash software, which is available on Nokia Online.



10. DISASSEMBLY INSTRUCTIONS



1) Nokia 3710 fold disassembly.



2) You must use the Nokia Standard Toolkit version 2. You will also need the DC plug.



3) Detach and remove the D-COVER ASSY in the direction shown.



4) Lift up the CAMERA BEZEL ASSY with the SS-93. Be careful not to damage the CAMERA! Do not use the CAMERA BEZEL ASSY again. Discard it.



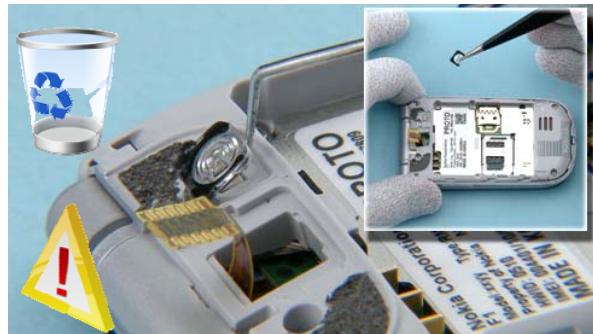
4) Remove the CAMERA FRAME ASSY with the tweezers. Do not use it again. Discard it.



6) To remove the CAMERA MODULE, use the dental tool to bend the sides of the CAM S.FLEX CLIP holding the CAMERA MODULE. Be aware of the sharp point of the dental tool - be careful not to injure yourself! The CAMERA MODULE can be removed.



7) CAM. S.FLEX CLIP can be taken away. Do not use it again. Discard it.



8) Carefully lift up the FLASH LENS LID ASSY with the dental tool. Be careful not to damage the flash underneath! Do not use it again. Discard it.



9) Unscrew the two TORX+ size 6 screws in the order shown. Note that these screws can be reused! Do not discard them.



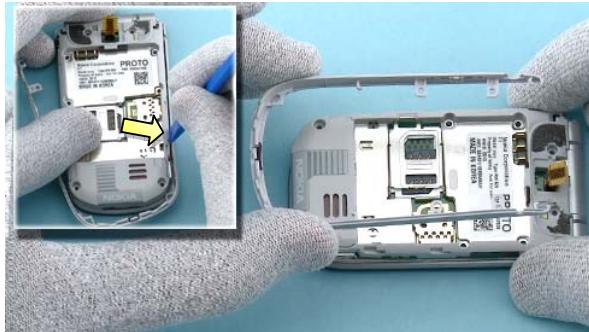
10) Unscrew the six TORX+ size 4 screws in the order shown. Do not use them again. Discard them.



11) Start to detach the C-COVER TRIM ASSY by releasing the shown clip with the SS-93.



12) Slide the SS-93 along the side to release the shown clip.



13) Also, detach the two clips on the other side. The C-COVER TRIM ASSY can now be removed.



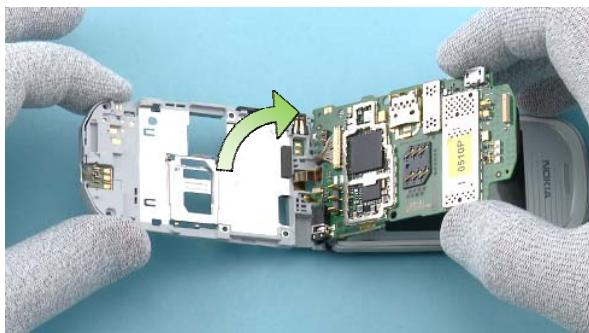
14) Fold open the phone. The KEYPAD can be removed.



15) Lift up the VOLUME KEYS slightly with the tweezers. Then insert the tweezers in the gap as shown and carefully lever out the VOLUME KEYS.



16) Use the SS-93 to release the clip holding the PWB.



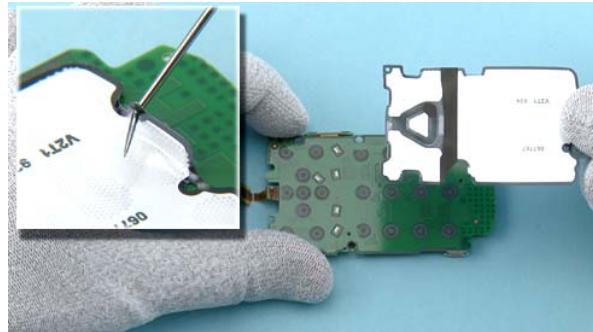
17) Turn over the PWB.



18) Disconnect the MCX CABLE from the UI FLEX ASSY using the sharp end of the SS-93. Be careful not to damage the connector or any nearby components!



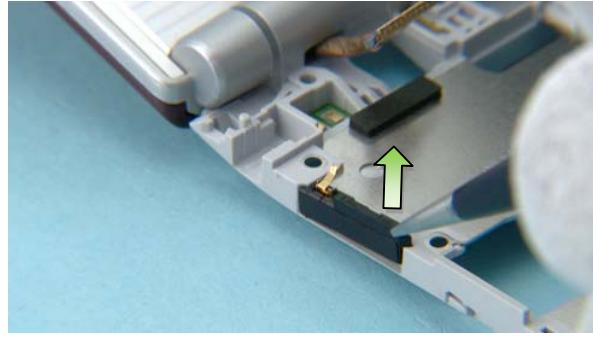
19) Remove the RUBBER STOPPER ASSY using the tweezers. Do not use it again. Discard it.



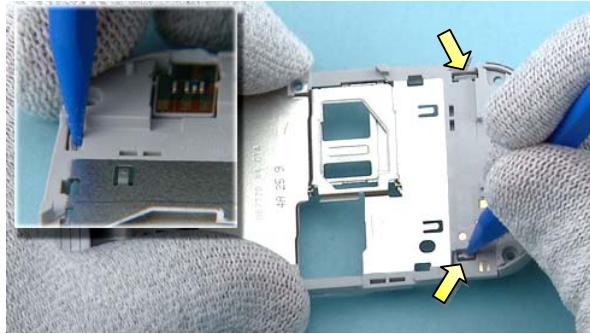
20) Use the dental tool to lift up one corner of the DOMESHEET ASSY. Then peel off and remove the DOMESHEET ASSY with fingers.



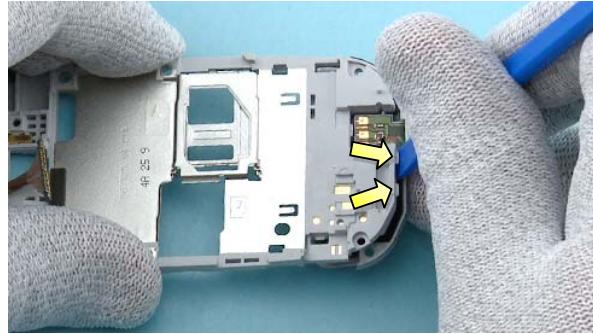
21) Lift up and remove the DC JACK with a DC plug.



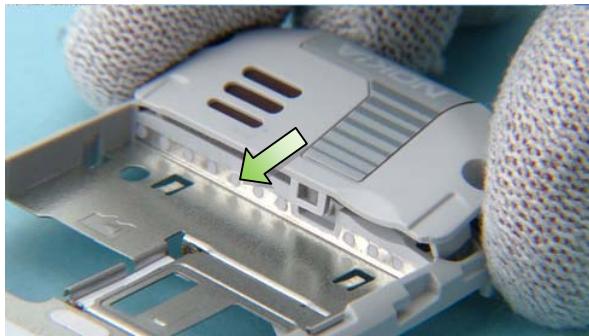
22) Lift up and remove the BT ANTENNA MODULE with the tweezers.



23) Using the sharp end of the SS-93, detach the shown clips holding the ANTENNA MODULE.



24) Then detach the clips on the bottom side of the ANTENNA MODULE.



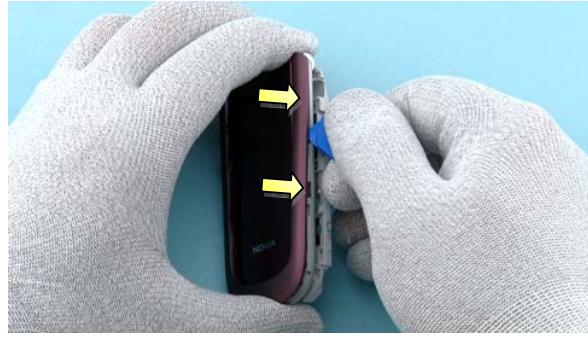
25) Turn over the phone. Lift up the ANTENNA MODULE in the direction shown and remove it.



26) Remove the IHF SPEAKER with the tweezers.



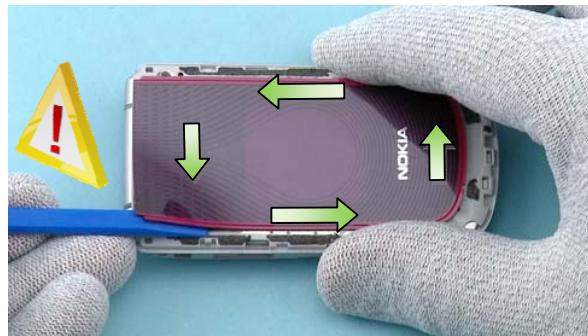
27) Use the SRT-6 to detach the two clips of the A-COVER ASSY on the top side. Continue to detach the two clips on the side.



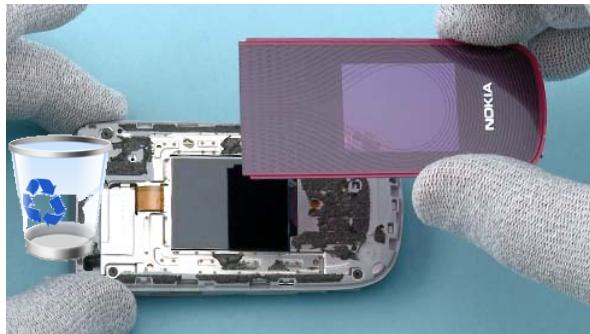
28) Then detach the two remaining clips on the other side.



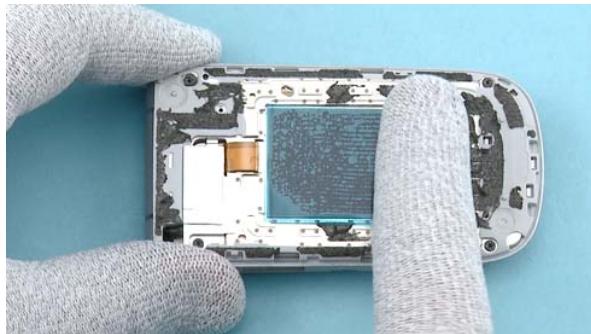
29) Remove the A-COVER ASSY. Do not use it again. Discard it.



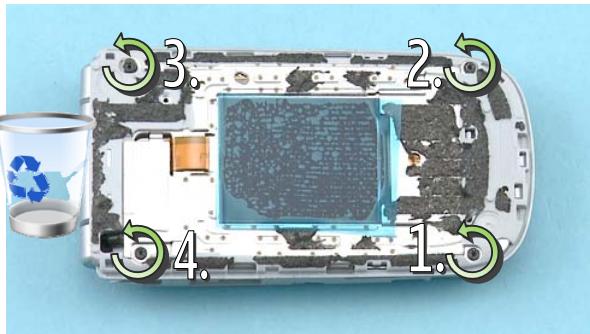
30) Use the SS-93 to detach the DISPLAY WINDOW ASSY. Be careful not to damage the display underneath!



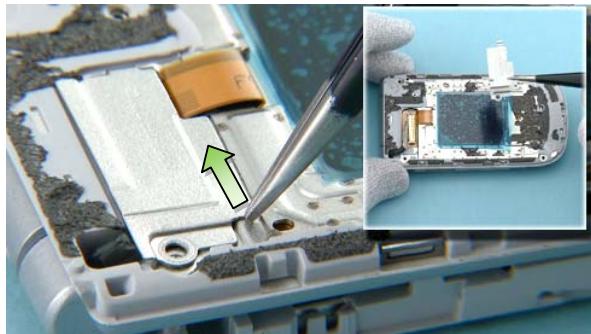
31) Remove the DISPLAY WINDOW ASSY. Do not use it again. Discard it.



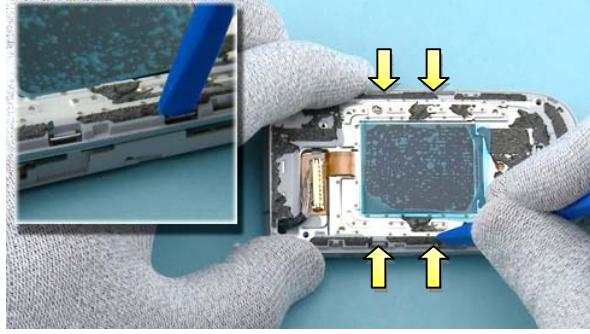
32) Protect the Secondary Display with a protective film.



33) Unscrew the four TORX+ size 4 screws in the order shown. Do not use them again. Discard them.



34) Use the tweezers to push the B-COVER MCX COVER ASSY in the direction shown to release it. Remove the B-COVER MCX COVER ASSY.



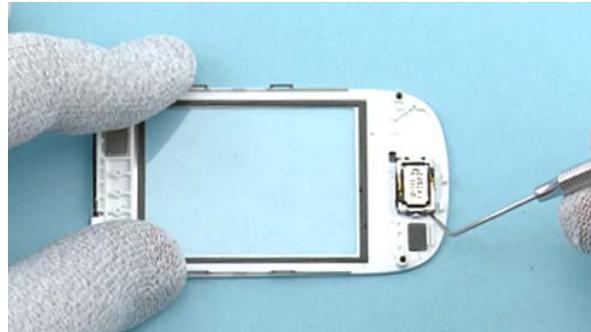
35) Detach the four clips of the B-COVER TRIM ASSY with the SS-93.



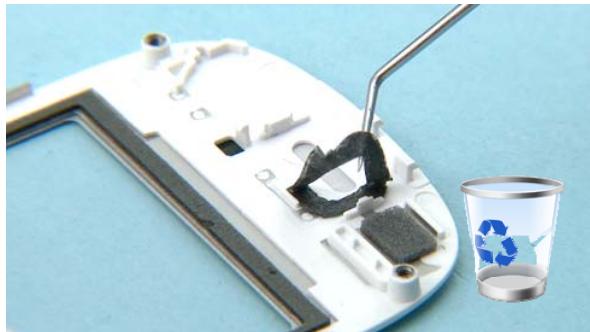
36) Fold the phone open and remove the B-COVER TRIM ASSY.



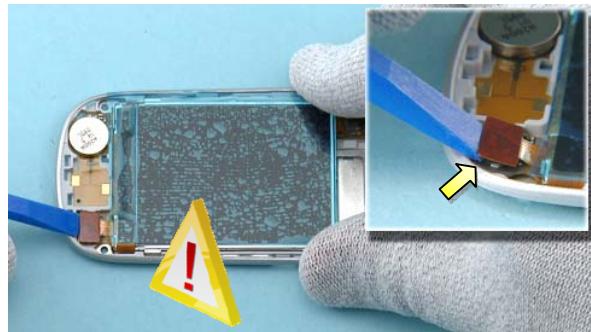
37) Protect the LCD with a protective film.



38) Lift up the EARPIECE with the dental tool and remove it with the tweezers.



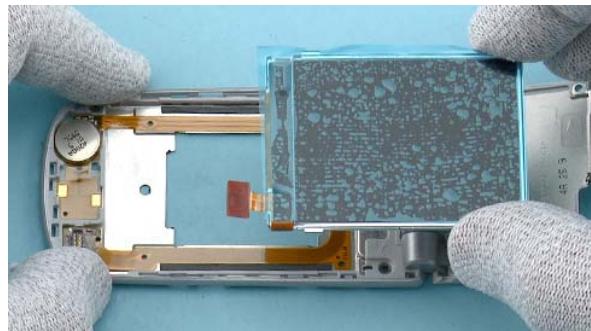
39) Remove the EARPIECE ADHESIVE with the dental tool. Do not use the adhesive again. Discard it.



40) Use the SS-93 to open the LCD CONNECTOR. While opening the connector be careful not to damage it!



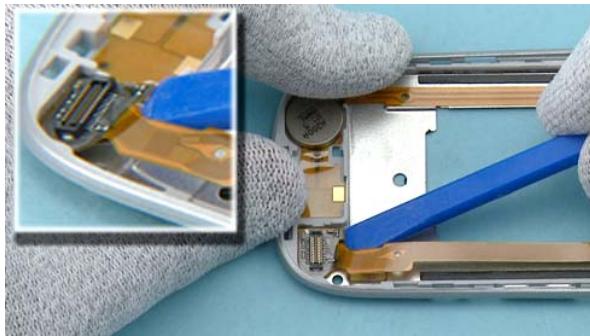
41) Carefully, place the SS-93 as shown and lift up the LCD. Be very careful not to break the LCD!



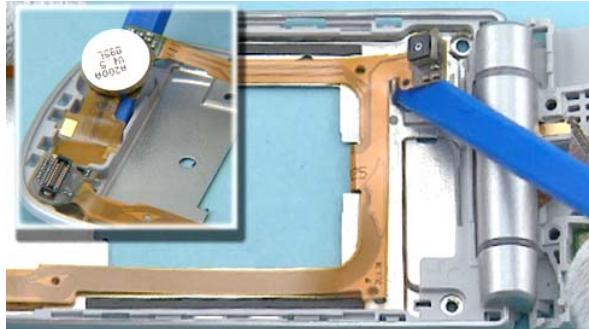
42) Remove the LCD.



43) Note that the UI FLEX ASSY disassembly is only for Level 3.



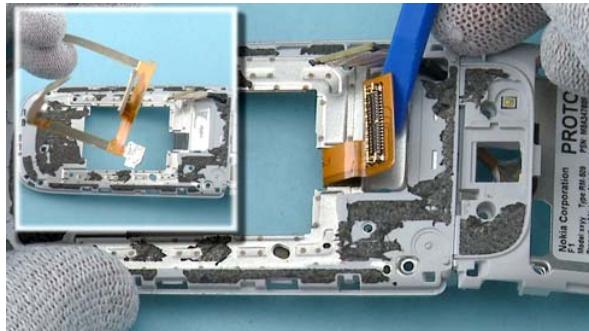
44) Start detaching the UI FLEX ASSY from the top side with the SS-93.



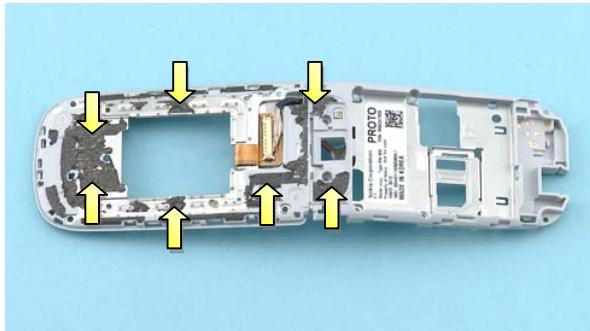
45) Next detach the top side of the flex completely and around the secondary camera area.



46) Turn over the phone and disconnect the MCX CABLE connector from the UI FLEX ASSY using the sharp end of the SS-93. Be careful not to damage the connector!



47) Detach the flex from the C-COVER using the SS-93 and remove it.



48) Finally, use the SS-93 to remove the adhesive residues from the HINGE ASSY.



49) Nokia 3710 fold disassembly is now complete.

-END OF DISASSEMBLY-

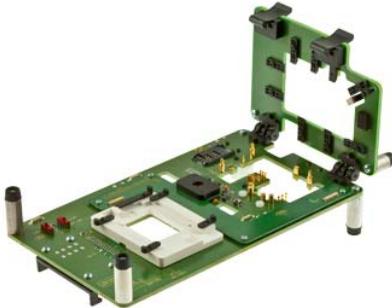
11. ASSEMBLY INSTRUCTIONS



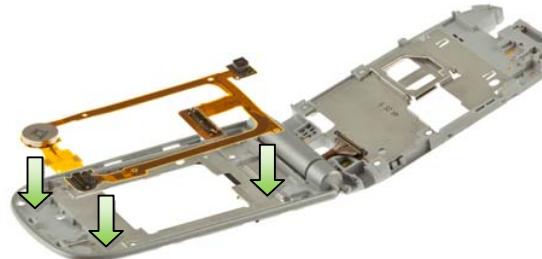
1) Nokia 3710 fold assembly.



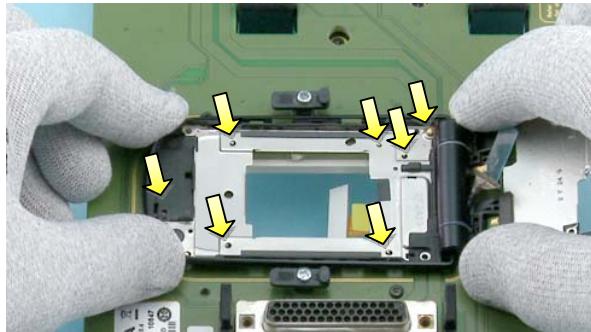
2) For assembling you need the Nokia Standard Toolkit version 2.



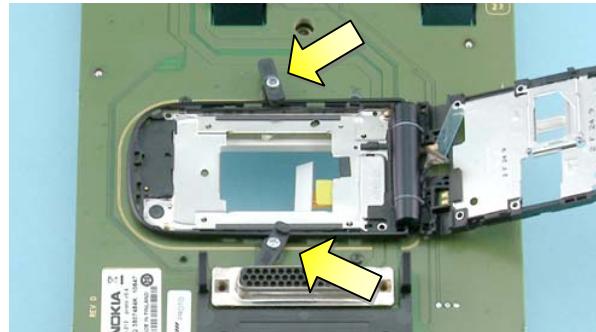
3) For level 3 you will also need the module jig MJ-212.



4) Note that assembling the UI FLEX ASSY is only for Level 3.



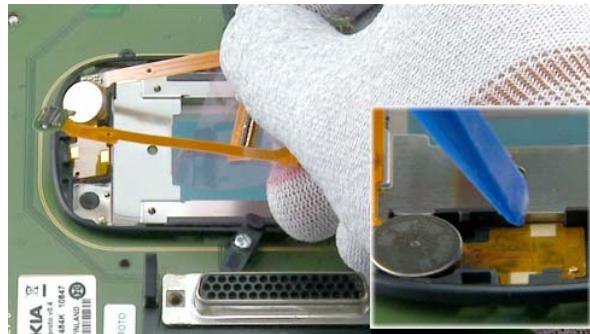
5) Place a new B-cover on the MJ-212 module jig. Use the guiding pins to position the B-COVER correctly.



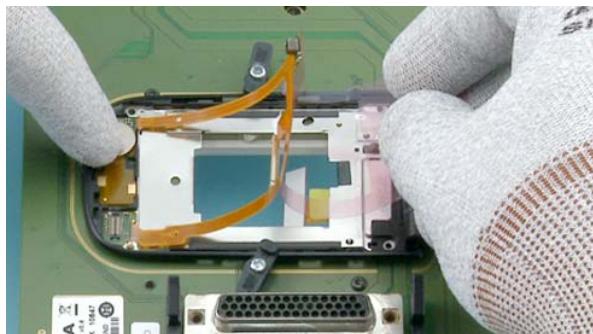
6) Close the locking mechanisms to hold the B-COVER in place.



7) Peel off the protective film from the top side of the UI FLEX ASSY.



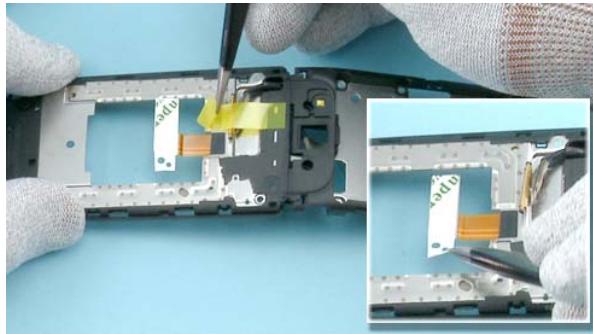
8) First attach the top side of the UI FLEX ASSY. Use the SS-93 to attach the flex correctly.



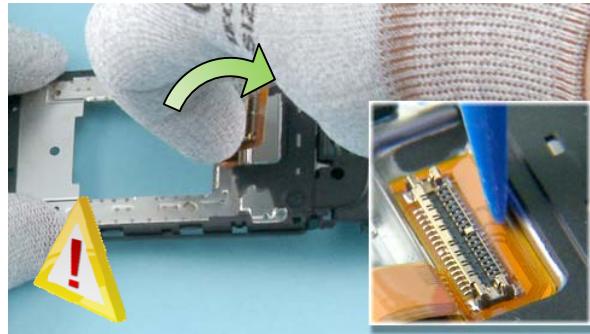
9) Remove the protective film. Use the guiding pins to position the flex correctly.



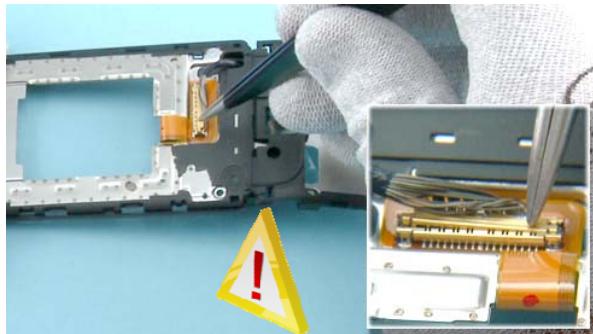
10) Use the SS-93 to attach the UI FLEX ASSY to the B-COVER.



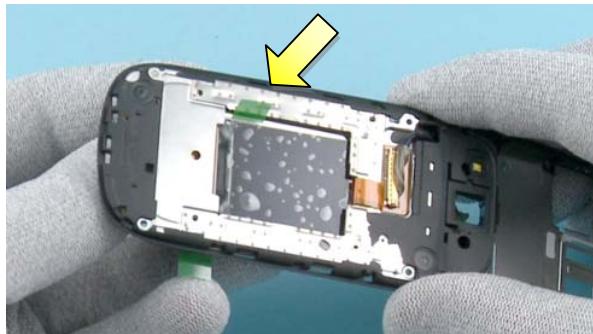
11) Use the tweezers to peel off the tape holding the MCX CABLE. Then remove the remaining protective film from the UI FLEX ASSY.



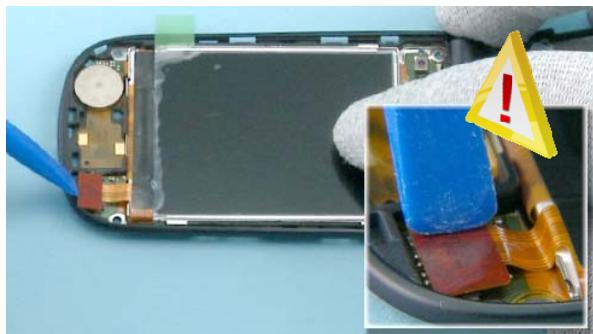
12) Turn the UI flex connector over and place it as shown. Press the UI flex carefully with the SS-93 to activate the adhesive.



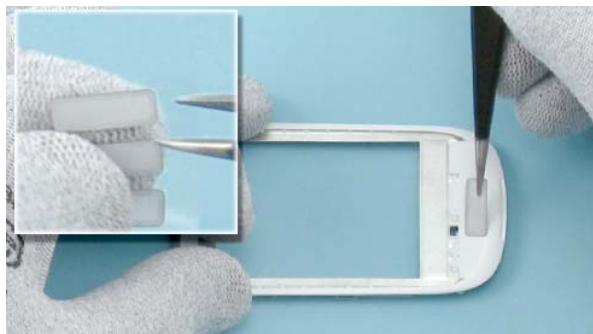
13) Use the tweezers to carefully connect the MCX CABLE connector. While closing the connector, be careful not to damage the cable or the connector.



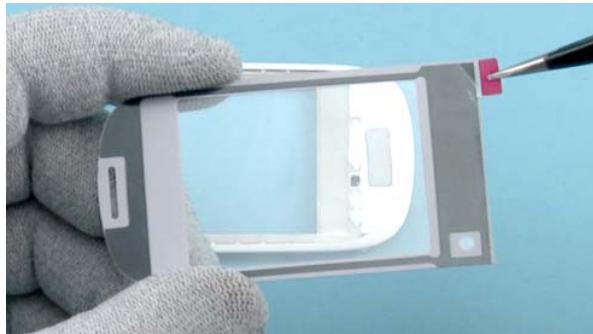
14) Place a new LCD module into the B-COVER. Make sure the protective film of the secondary display is aligned correctly.



15) Use the SS-93 to secure the LCD connector. While closing the connector, be careful not to damage any nearby components.



16) Replace the B-COVER TRIM ASSY with a new one. Unwrap a new EARPICE NET. Place the EARPICE NET with the tweezers.



17) Peel off the protective film from the new DISPLAY WINDOW ASSY.



18) Start placing the DISPLAY WINDOW ASSY from the top side of the assy. Press it firmly to activate the adhesive.



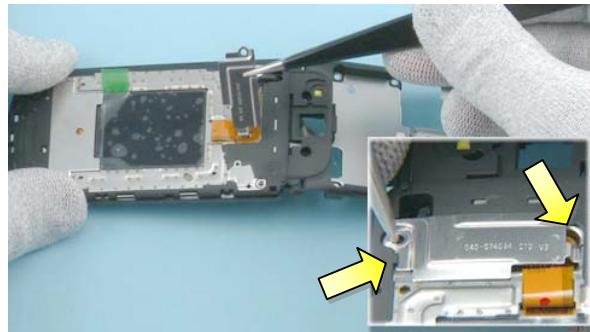
19) Remove the protective film from the LCD



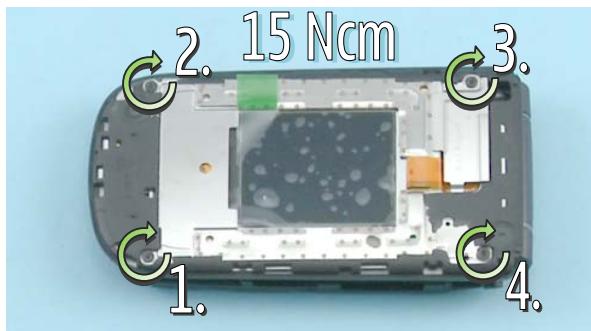
20) Attach first the top side of the B-COVER TRIM ASSY to the B-COVER.



21) Press the edges of the B-COVER TRIM ASSY firmly to attach the side clips correctly.



22) Place the MCX COVER ASSY with the tweezers. Check the correct alignment of these clips.



23) Tighten the four TORX + size 4 screws to the torque of 15 Ncm in the order shown. Remember to use new screws.



24) Remove the protective film from the secondary display.



25) Peel off the protective film from a new A-COVER WINDOW ASSY.



26) Use the guidings on the top side of the HINGE ASSY to attach the A-COVER WINDOW ASSY correctly.



27) Also check with these guidings that the A-COVER WINDOW ASSY is correctly placed. Then press the A-COVER WINDOW ASSY firmly to activate the adhesive. Be careful not to damage the secondary display.



28) Remove the protective film from a new A-COVER ASSY.



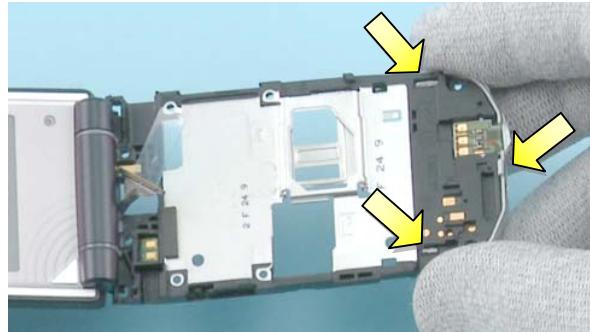
29) First attach the top side of the A-COVER ASSY. Then press the edges of the A-COVER ASSY firmly to attach the side clips correctly.



30) Insert the IHF SPEAKER into the slot shown with the tweezers.



31) Place the ANTENNA MODULE. Check the correct alignment of this clip.



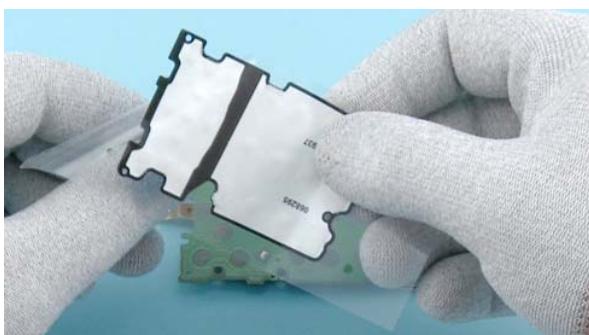
32) Then press the ANTENNA MODULE and the COVER together. And make sure these clips are attached too.



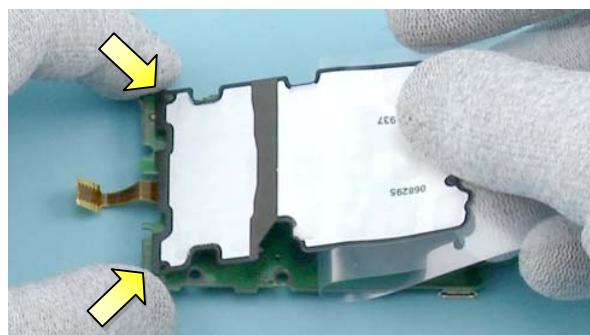
33) Use the tweezers to place the BT ANTENNA MODULE.



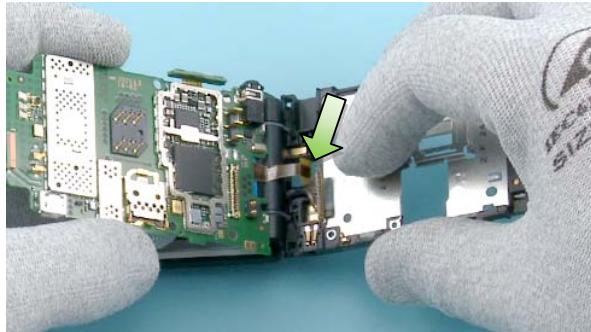
34) Place the DC jack with the tweezers.



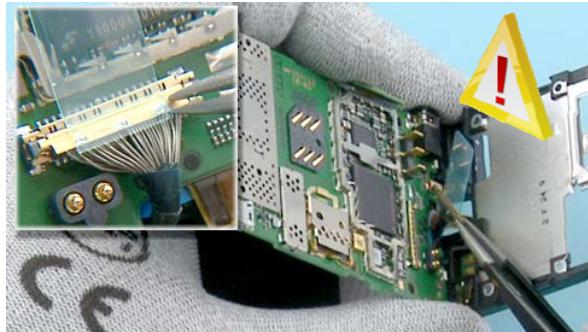
35) Peel off the protective film from the top side of a new domesheet.



36) Use the guidings to place the domesheet onto the engine board. Remove the rest of the protective film.



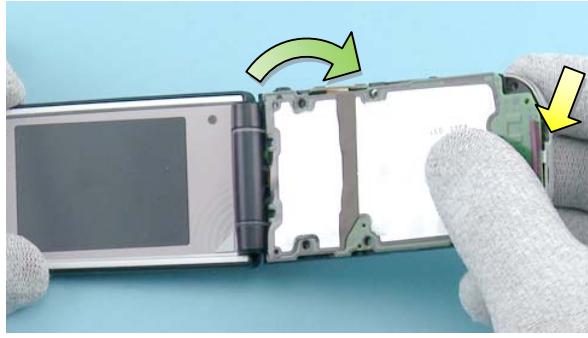
37) Place the engine board as shown. Make sure the flex put trough the gap.



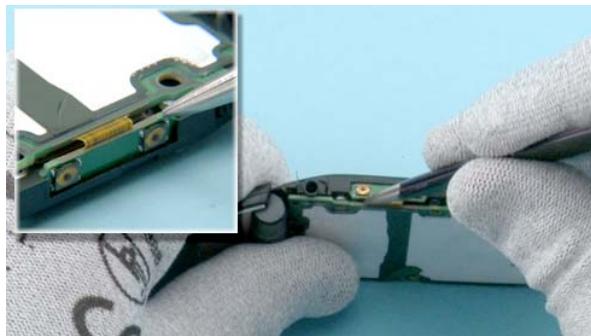
38) Then connect the MCX CABLE to the engine board with the tweezers. While closing the connector, be careful not to damage any nearby components.



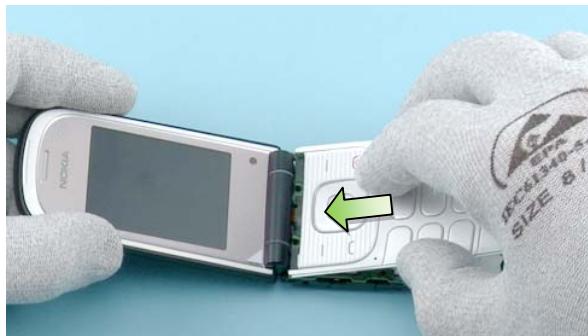
39) Remove the protective film from the connector.



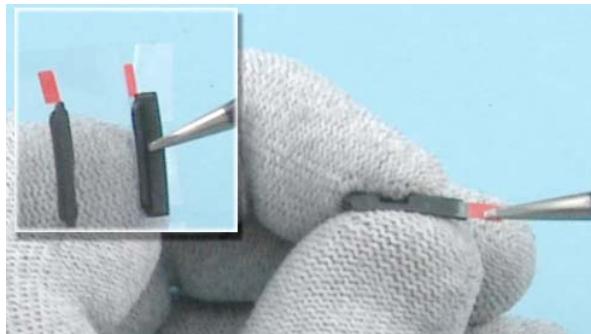
40) Turn over the engine board and place it on top of the C-COVER ASSY. Then secure the clip on the bottom side of the assembly.



41) Place the SIDE KEY in it's slot.



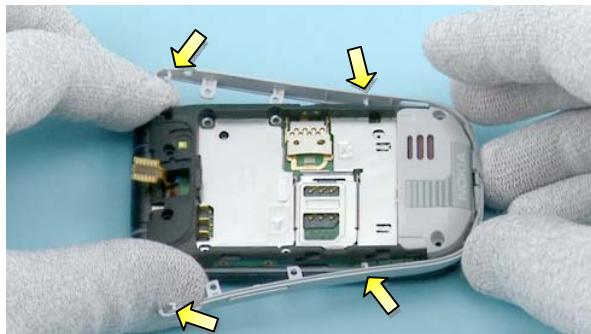
42) Attach the KEYPAD.



43) Unwrap the new RUBBER STOPPER.



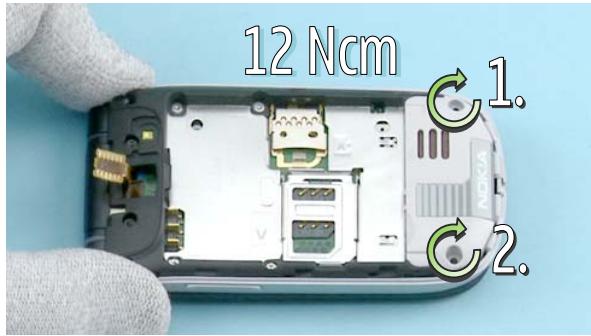
44) Place the stopper onto the engine board with the tweezers and fold the device.



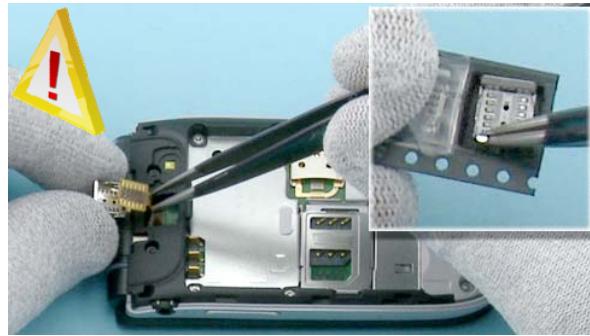
45) Fit the C-COVER TRIM ASSY to the device. Check the correct alignment of the clips.



46) Tighten the six TORX + size 4 screws to the torque of 12 Ncm in the order shown. Remember to use new screws.



47) Tighten the two TORX + size 6 screws to the torque of 12 Ncm in the order shown.



48) Unwrap a new camera support clip. Place the camera flex into the camera support clip carefully with the tweezers.



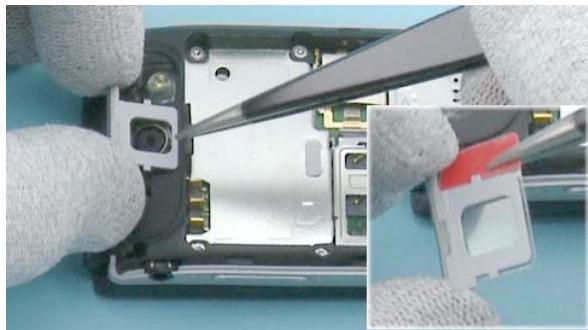
49) Unwrap a new camera module and place it into the camera support clip. Use fingers to press the camera lightly until it is correctly placed.



50) Position the CAMERA ASSY into the C-Cover. Be careful with the flex.



51) Remove the protective film from a new FLASH LENS. Place the lens with the tweezers.



52) Peel off the protective film from a new CAMERA FRAME ASSY. Then mount the CAMERA FRAME ASSY correctly.



53) Replace the BATTERY COVER.



54) Remove the protective film from a new CAMERA BEZEL ASSY. Then position the CAMERA BEZEL ASSY onto the device and press the assy firmly to activate the adhesive.

Nokia 3710 fold assembly is now complete.

-END OF ASSEMBLY-

12. SOLDER COMPONENTS

